

### **REMARKS**

The Office Action of July 12, 2006 rejected claims 54-56, 58-82, 98-104, and 112-114 and allowed claims 105-111 and 115-120. Reconsideration of the application is respectfully requested.

### **PRIORITY**

Applicants have amended the specification to change the priority claim.

### **OATH/DECLARATION**

Applicants submit herewith a newly executed oath/declaration.

### **CLAIM OBJECTIONS**

The Office objected to claims 65 for various informalities. Applicants have amended claim 65 and respectfully request the removal of this objection.

### **CLAIM REJECTIONS – 35 U.S.C. § 112**

The Office rejected claims 98-104 and 112-114 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Applicants have cancelled the claims, rendering these rejections moot.

### **CLAIM REJECTIONS – 35 U.S.C. § 102**

The Office rejected claims 65-68 and 71 under 35 U.S.C. § 102(b) as being anticipated by Chiang et al. Applicants respectfully traverse this rejection. The Office states that Chiang's GaInP layer prevents diffusion of arsenic from the middle GaAs cell into the Ge substrate. Applicants respectfully disagree for the reasons set forth in the response filed April 26, 2006. To elaborate, claim 65 recites a barrier layer that functions to "inhibit the diffusion of arsenic" into the germanium substrate. Chiang discloses a layer of arsenic right next to the germanium substrate. It should be clear that a layer containing arsenic can not prevent the diffusion of arsenic. Applicants respectfully request the removal of this rejection.

The Office rejected claims 54-57, 59-67, 69, 71, and 72 under 35 U.S.C. § 102(e) as being anticipated by Ermer et al. (U.S. Patent 6,380,601). Applicants assert that the section 131 declaration previously submitted shows that the present invention was completed before March 29, 1999, the filing date of Ermer. Therefore, Ermer is not prior art. Applicants respectfully request the removal of this rejection.

### **CLAIM REJECTIONS – 35 U.S.C. § 103**

The Office rejected claims 65 and 71 under 35 U.S.C. § 103(a) as being unpatentable over Olson (U.S. patent 5,342,453). The Office asserts that, although Olson does not disclose a Germanium substrate, it would have been obvious to use a germanium substrate in Olson and that the passivating layer of Olson reads on the barrier layer of claim 65. Applicants respectfully disagree.

The cell in Olson is made of the same material as the substrate: GaAs. There is no reason to prevent the diffusion of arsenic from the solar cell to the substrate in Olson because they are made of the same material. In contrast, claim 65 recites a GaAs solar subcell layer and a Ge substrate, two different materials. Therefore, the passivating layer of Olson does not serve the same function as the barrier layer.

Moreover, the Olson patent is clearly directed solely to GaAs substrates. It would not have been obvious to use another type of substrate with the Olson invention. Applicant respectfully requests the removal of this rejection.

The Office rejected claim 72 as being unpatentable over Olson in view of Friedman, et al. Applicant asserts that claim 72 is allowable, *inter alia*, for depending from an allowable base claim. In addition, Applicant asserts that Friedman fails to disclose a barrier layer with a thickness of 201 to 350 Angstroms.

The Office rejected claims 60 and 72 as being unpatentable over Olson in view of Friedman et al. Applicants assert that claims 60 and 72 are patentable as depending from an allowable base claim.

The Office rejected claims 65-68, 71, and 72 under 35 U.S.C. § 103(a) as being unpatentable over Chiang in view of Friedman. Applicants assert that claim 65 is allowable of Chiang for the reasons set forth above. Applicants assert that claims 66-68, 71, and 72 are patentable, *inter alia*, as depending from an allowable base claim.

The Office rejected claims 65-68, 71, and 73 under 35 U.S.C. § 103(a) as being unpatentable over Chiang in view of Stanbery (U.S. Patent 4,322,571). For the reasons set forth

above with respect to the section 102 rejection based on Chiang, Applicants assert that claim 65 and the claims that depend therefrom are patentable over Chiang in view of Stanbery.

The Office rejected claims 65-71, 74-76, and 78-82 under 35 U.S.C. § 103(a) as being unpatentable over Chiang et al. in view of Wiesmann. Applicants assert that claims 65 and 74 are allowable of Chiang for the reasons set forth above. Applicants assert that claims 65-71, and 74-76, and 78-82 are patentable, *inter alia*, as depending from an allowable base claim.

The Office rejected claims 72 and 77 as being unpatentable over Chiang in view of Wiesmann and further in view of Friedman. Applicants respectfully traverse this rejection. As stated above, 200 Angstroms does not read upon the present claim's recitation of 201 to 350 Angstroms. Applicants respectfully request the removal of this rejection.

The Office rejected claims 54-56, 58-72, and 74-82 under 35 U.S.C. § 103(a) as being unpatentable over Ermer et al. in view of Weismann et al. As discussed above, Ermer is not prior art. Therefore the combination of Ermer with any other reference is not prior art. Applicants respectfully request the removal of this rejection.

The Office rejected claims 73 and 83-90 under 35 U.S.C. § 103(a) as being unpatentable over Ermer et al. over Weismann and further in view of Stanbery. As discussed above, Ermer is not prior art. Therefore the combination of Ermer with any other reference is not prior art. Applicants respectfully request the removal of this rejection.

## **CONCLUSION**

If there are additional charges concerning this response, please charge to White & Case LLP Deposit Account 50-3672.

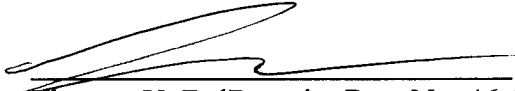
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A favorable consideration of the present amendment together with the original application is respectfully requested.

Respectfully submitted,

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By:



Thomas V. DelRosario, Reg. No. 46,658  
WHITE & CASE LLP  
1155 Avenue of the Americas  
New York, NY 10036  
(650) 213-0345